UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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Seattle, Washington 98101-3140

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OFFICE OF
COMPLIANCE AND ENFORCEMENT

Reply to: OCE-084

Carl Bach
EHS Remediation Project Manager
The Boeing Company
P.O. Box 3707, M/C 1W-12
Seattle, Washington 98124-2207

Jennie Goldberg
Superfund Program Manager
Seattle City Light
700 Fifth Avenue, Suite 3200
P.O. Box 34023
Seattle, Washington 98124-4023

Re: Toxic Substances Control Act (TSCA) Risk-Based Disposal Approval for the North Boeing Field 3-333 Building Soil Excavation

Dear Mr. Bach and Ms. Goldberg:

This letter constitutes approval under the authority of 40 Code of Federal Regulations (C.F.R.) § 761.61(c) for the cleanup and verification sampling of certain polychlorinated biphenyl (PCB) remediation waste at the 3-333 Building area of the North Boeing Field facility in Seattle, Washington. More specifically, this approval authorizes The Boeing Company (Boeing) to perform interim cleanup[1] actions to remove soils contaminated by PCBs with as-found concentrations greater than or equal to 50 parts per million (ppm), and to perform verification sampling following the removal of contaminated soils as documented in the "Interim Action Work Plan, 2011 3-333 Building Soil Excavation, North Boeing Field, Seattle, Washington," Reference 13 in Enclosure 1 to this approval. This approval is subject to the conditions below. The rationale of the U.S. Environmental Protection Agency (EPA) for establishing each of these conditions is contained in the Statement of Basis appearing as Enclosure 2 to this letter.

Background

The Washington State Department of Ecology (Ecology) and the EPA are working to clean up contaminated sediments and control sources of recontamination in the Lower Duwamish Waterway

[1] Consistent with the authority of 40 C.F.R. § 761.61(c) under which this approval is being issued, EPA is referring to work being authorized as an "interim cleanup action." This work is also being authorized by the Washington State Department of Ecology, under the authority of the Model Toxics Control Act, 70.105D Revised Code of Washington, as an "interim remedial action."

(LDW) near Seattle, Washington. The LDW is an approximately 5.5 mile portion of the Lower Duwamish River which flows into Elliott Bay. The sediments along the LDW contain a wide range of contaminants which are likely the result of years of nearby industrial activity and run-off from urban areas. These contaminants include PCBs, PAHs (polycyclic aromatic hydrocarbons), chlorinated dioxins and furans, metals, and phthalates.

The EPA is leading the sediment contamination investigation for the LDW with support from Ecology. In 2001, the EPA added the LDW to the Superfund National Priorities List; Ecology added the LDW to the Washington Hazardous Sites List in 2002. The respective roles and responsibilities of the EPA and Ecology have been documented in "Lower Duwamish Waterway Site Memorandum of Understanding between the United States Environmental Protection Agency and the Washington State Department of Ecology," dated April 2004.

A number of sites and facilities in the vicinity of the LDW have been identified as sources contributing to sediment contamination. One area that has been identified as a potential source of PCB contamination is soils and/or groundwater near 3-333 Building within the Boeing Propulsion Engineering Labs (PEL) area of North Boeing Field (NBF) (see Figure 2 of Reference 13). PCBs from this source area, as well as nearby areas along the fenceline between NBF and the Georgetown Steam Plant (GSP), have the potential to contaminate the Slip 4 area of the LDW through storm water discharges (Section 1 of Reference 4).

This approval is an interim cleanup action that will precede a full remedial investigation and feasibility study process planned for this project area, along with the nearby fenceline excavation area which includes portions of the GSP and NBF properties. The EPA has previously issued approvals for the fenceline area of the GSP and NBF, References 5 and 6, respectively. This approval is the third of a series of phased approvals providing authorization for those aspects of the planned source control work subject to the requirements of 40 C.F.R. Part 761.

EPA's Approval

This written decision for a risk-based method for cleanup and verification sampling of PCB remediation waste is based on Boeing's application for a risk-based disposal approval, Reference 13, and the documentation identified in Enclosure 1. All sections of Boeing's application directly or indirectly relating to cleanup and verification of PCBs, including sections explicitly referenced in this approval, are incorporated by reference into this approval.

The application for a risk-based disposal method upon which this approval is based was submitted by Boeing (Reference 13[2]). Nevertheless, under the Toxic Substances Control Act (TSCA) and the associated PCB regulations, the EPA views both facility owners and operators as having legal responsibilities for responding to the release and migration of PCBs. Property ownership of the project area is not documented in Boeing's application, but the EPA has obtained property ownership

[2] Boeing's initial application for a risk-based disposal approval, Reference 1, was provided to the EPA via letter dated June 10, 2011, Reference 2. The EPA posed several questions to Boeing concerning this application via e-mail, Reference 10 (see also footnote 5 below). On behalf of Boeing, Landau Associates provided responses to EPA's question via e-mail, Reference 11. Boeing's original application for a risk-based disposal approval was then modified to incorporate these responses and transmitted to the EPA via e-mail of September 23, 2011, Reference 12. The revised application appears as Reference 13.

information from King County records at http://www5.kingcounty.gov/iMAP/viewer.htm?mapset=kcproperty. Based on this information, the proposed excavations are fully within Parcel 7006700570, owned by Seattle City Light. Therefore, this approval is being issued jointly to Boeing as operator of the project area, and to Seattle City Light as property owner, with the understanding that Boeing has accepted primary responsibility for implementing the risk-based disposal method approved herein by the EPA.

In granting this approval, the EPA finds that the proposed cleanup, verification, and on-site storage for disposal of PCB remediation waste, subject to the conditions below, will not pose an unreasonable risk of injury to health or the environment. Boeing shall ensure that activities conducted pursuant to this approval are in full compliance with conditions of the approval. The conditions of this approval are enforceable under TSCA and implementing regulations at 40 C.F.R. § 761.61(c). Any actions by Boeing which violate the terms and conditions of this letter may result in administrative, judicial, civil, or criminal enforcement by the EPA in accordance with Section 16 of TSCA, 15 U.S.C. § 2615.

Conditions

1. Boeing is authorized to perform cleanup and verification sampling of PCB remediation waste with PCB concentrations greater than or equal to 50 ppm as documented in Reference 13.
2. Boeing must complete work authorized by Condition 1 by December 31, 2011. As a framework for anticipated final cleanup, this approval will remain in effect for the duration of such work requirements as the EPA may establish through future modifications of this approval. Boeing may request an extension to this authorization by providing a written request to the EPA according to Condition 11.
3. In conducting work authorized by this approval, Boeing shall ensure that effective controls are in place to prevent or minimize dispersal of soil or other material contaminated with PCBs. Such measures may include, but are not limited to, use of exclusion and decontamination zones around work areas. If water is used for dust control purposes, the amount of water shall be limited to that necessary for effective dust control to minimize the potential for the spread of contamination. All water used for decontamination and vehicle/truck washes shall be managed in the temporary wastewater treatment system documented in Section 2.4 of Reference 13.
4. Boeing shall ensure that any dewatering of excavated soils as discussed in Section 3.1 of Boeing's application (Reference 13) will occur within the footprint of the TSCA excavation documented in Figure 7 of Reference 13. To the extent practicable, all drained water shall be returned to the excavation at or near the location of soils within the saturated zone to minimize the potential spread of PCB contamination, or managed in the temporary wastewater treatment system or NBF decant treatment facility as documented in Section 2.4 of Reference 13. Soils excavated pursuant to this approval from within the saturated zone must be dewatered such that no free-flowing water remains before placing such soils in lined trucks or roll-off boxes for off-site disposal.
5. Boeing shall ensure that all PCB remediation waste cleaned up pursuant to this approval is disposed of according to the requirements of 40 C.F.R. § 761.61(b). All shipments of PCB remediation waste for off-site disposal shall comply with the manifest requirements of 40 C.F.R. § 761.207.

6. Boeing shall ensure that any contractor conducting work authorized by this approval is provided a copy of the approval prior to the start of the authorized work. Boeing shall ensure that all work subject to this approval is conducted according to the conditions of this approval.

7. Boeing shall ensure that all work subject to this approval will be subject to the requirements of the Health and Safety Plan (HASP) included as Appendix E to Reference 13, including appropriate training requirements in Section 5.0 and personal safety requirements in Section 4.0 of the HASP for all personnel that may be exposed to PCBs during work subject to this approval.

8. Within ten (10) days following receipt of any written approval from Ecology pursuant to Agreed Order DE 5685 for any additional or modified work at or within the physical boundaries of NBF that is subject in whole or part to the requirements of 40 C.F.R. Part 761, Boeing shall provide a written request to the EPA according to Condition 11 to modify this approval to include the additional or modified work requirements. This request shall include a copy of Ecology's written approval.

9. Nothing in this approval relieves Boeing of any obligation to comply with other rules and regulations applicable to the activities subject to this approval.

10. If at any time before, during, or after cleanup and verification sampling of PCB remediation waste pursuant to this approval, Boeing possesses or is otherwise made aware of any data or information (including but not limited to site conditions that differ from those presented in the application) that activities approved herein may pose an unreasonable risk of injury to health or the environment, Boeing must report such data or information via facsimile or e-mail to the EPA according to Condition 12 within five working days, and in writing to the EPA Region 10 Regional Administrator within 30 calendar days of first possessing or being made aware of such data or information. Boeing shall also report in the same manner, new or different information related to a condition or any element of the approved activities if the information is relevant to this approval. The EPA may direct Boeing to take such actions it finds necessary to ensure the approved activities do not pose an unreasonable risk of injury to health or the environment. Boeing shall follow such direction until written approval is obtained from the EPA that finds the condition(s) requiring such direction no longer poses an unreasonable risk of injury to health or the environment.

11. The EPA reserves the right to modify or revoke this approval based on information provided pursuant to Condition 10, or any other information available to the EPA that provides a basis to conclude that activities covered by this approval pose an unreasonable risk of injury to health or the environment. Boeing may request modification of this approval by providing written notice according to Condition 12. If the EPA agrees with a request for modification, the EPA will provide written approval to Boeing. Prior to obtaining written approval of a modification request, Boeing shall comply with the existing approval conditions.

12. Submissions required by, or that may be submitted pursuant to, this approval shall be provided to the EPA as follows:

EPA: Edward J. Kowalski, Director
Office of Compliance and Enforcement
EPA Region 10
1200 6th Ave., Suite 900, MS OCE-164
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w/copies to

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Should you have any questions or comments, please contact Dave Bartus at (206) 553-2804, or Bartus.dave@epa.gov.

Sincerely,

Edward J. Kowalski
Director

Enclosures
1. References
2. Statement of Basis

cc: Mark Edens
Ecology Northwest Regional Office

Kris Flint
U.S. Environmental Protection Agency

Karen Keeley
U.S. Environmental Protection Agency

Enclosure 1
References

1) Work Plan, "Interim action Work Plan, 2011 3-333 Building Soil Excavation, North Boeing Field, Seattle, Washington," Landau Associates, dated June 9, 2011
2) Letter, "North Boeing Field/Georgetown Steam Plant Agreed Order No. DE 5685, North Boeing Field 3-333 Building Interim Action – Approval of Interim Action Work Plan," Mark Edens, Washington State Department of Ecology to Carl Bach, The Boeing Company, dated June 10, 2011.
3) Letter, "Submittal of the North Boeing Interim Action Work Plan for the 2011 3-333 Building Soil Excavation under TSCA Risk-based Disposal Approval Rules of 40 C.F.R. § 761.61(c)," Carl Bach, The Boeing Company, to Dennis J. McLerran, Regional Administrator, United States Environmental Protection Agency, Region 10 and Edward Kowalski, Director, Office of Compliance and Enforcement, United States Environmental Protection Agency, Region 10, dated July 13, 2011.
4) Work Plan, "Georgetown Steam Plant, Interim Action Work Plan, Integral Consulting, Inc.," dated June 2, 2011.
5) Work Plan, "Interim Action Work Plan, 2011 Fenceline Area Soil Excavation, North Boeing Field, Seattle, Washington," Landau Associates, dated June 2, 2011.
6) Letter, "Toxic Substances Control Act (TSCA) Risk-Based Disposal Approval for the North Boeing Field Fenceline Area Soil Excavation," Edward J. Kowalski, Director, Office of Compliance and Enforcement, U.S. Environmental Protection Agency, Region 10 to Jennie Goldberg, Seattle City Light, dated September 9, 2011
7) Letter, "Toxic Substances Control Act (TSCA) Risk-Based Disposal Approval for the North Boeing Field Fenceline Area Soil Excavation," Edward J. Kowalski, Director, Office of Compliance and Enforcement, U.S. Environmental Protection Agency, Region 10 to Carl Bach, The Boeing Company, Jennie Goldberg, Seattle City Light and Peter Dumaliang, King County International Airport, dated September 9, 2011.
8) E-mail, "TSCA Coordination," Mark Edens, Ecology to Jennie Goldberg, Seattle City Light, Carl Bach, The Boeing Company, and Peter Dumaliang, King County, dated Thursday, February 24, 2011 10:59 AM.
9) E-mail, "RE: Signed RBDA - Georgetown Steam Plant & NBF Fenceline Area Soil Excavation," Carl Bach, The Boeing Company to Dave Bartus, U.S. Environmental Protection Agency, Region 10 and Mark Edens, Washington State Department of Ecology, dated 9/13/2011.
10) E-mail, "RE: Signed RBDA - Georgetown Steam Plant & NBF Fenceline Area Soil Excavation," U.S. Environmental Protection Agency, Region 10 to Mark Edens, Washington State Department of Ecology, dated 9/12/2011.
11) E-mail, "NBF Final Draft Interim Action Work Plan 2011 3-333 Building Soil Excavation," Kristy J. Hendrickson, PC, Landau Associates, Inc., to Mark Edens, Washington State Department of Ecology and Dave Bartus, U.S. Environmental Protection Agency, dated September 14, 2011, with attachment.
12) E-mail, "3-333 Building Interim Action Work Plan," Carl Bach, Boeing to Dave Bartus, EPA and Mark Edens, Ecology, dated 9/23/2011.
13) Work Plan, "Interim Action Work Plan, 2011 3-333 Building Soil Excavation, North Boeing Field, Seattle, Washington," Landau Associates, dated September 19, 2011.

Enclosure 2
Statement of Basis

Background

The Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency, Region 10 (EPA) are working to clean up contaminated sediments and control sources of recontamination in the Lower Duwamish Waterway (LDW) near Seattle, Washington. The Lower Duwamish Waterway (LDW) is an approximately 5.5 mile portion of the Lower Duwamish River which flows into Elliott Bay. The sediments along the LDW contain a wide range of contaminants which is likely the result of years of nearby industrial activity and run off from urban areas. These contaminants include PCBs (polychlorinated biphenyls), PAHs (polycyclic aromatic hydrocarbons), chlorinated dioxins and furans, metals, and phthalates.

The EPA is leading the sediment contamination investigation for the LDW with support from Ecology. In 2001, the EPA added the LDW to the Superfund National Priorities List; Ecology added the LDW to the Washington Hazardous Sites List in 2002. The respective roles and responsibilities of the EPA and Ecology have been documented in "Lower Duwamish Waterway Site Memorandum of Understanding between the United States Environmental Protection Agency and the Washington State Department of Ecology," dated April 2004.

A number of sites and facilities in the vicinity of the LDW have been identified as sources contributing to sediment contamination. One area that has been identified as a potential source of PCB contamination is soils in the vicinity of 3-333 Building within the Boeing Company Propulsion Engineering Labs (PEL) area of North Boeing Field (NBF). See Figure 2 of Reference 13. The NBF area is owned in part by King County and in part by Seattle City Light, and is leased to The Boeing Company (Boeing), although soil excavation work subject to this approval is limited to property owned by Seattle City Light (Reference 9). PCBs from this source area have the potential to contaminate the Slip 4 area of the LDW through storm water discharges (See Section 1 of Reference 4).

Boeing, King County, and the City of Seattle (the Parties), entered into an Agreed Order (DE 5685) with Ecology to conduct an investigation at the GSP and NBF facilities. This Agreed Order was established pursuant to the state Model Toxics Control Act (MTCA), 70.105D Revised Code of Washington. Under the Agreed Order, the Parties are required to complete a Remedial Investigation and Feasibility Study (RI/FS) at the site. The purpose of the Remedial Investigation is to define the nature and extent of contamination at the site and to determine if it is contributing to the sediment contamination in the LDW. The Feasibility Study will use the results of the Remedial Investigation to evaluate and choose measures to cleanup contamination and prevent recontamination of the LDW sediments. Prior to completion of the RI/FS, Ecology and the Parties agreed to conduct certain interim measures to, among other objectives, reduce the quantity of contaminants (including PCBs) that may be transported via storm water flow into Slip 4 within the LDW. The work plan provided to, and approved by Ecology, in Reference 1[3] documents the specific source control work to be conducted in the vicinity of 3-333 Building within the NBF facility. Similar work plans, entitled "Georgetown Steam Plant Interim Action Work Plan" and "Interim Action Work Plan, 2011 Fenceline Area Soil Excavation, North Boeing Field, Seattle, Washington" (References 4 and 5) have been provided to and approved by Ecology regarding

[3] As noted in footnote 2 above, this work plan was subsequently revised and submitted to the EPA as Reference 13.

similar source control areas adjacent to the 3-333 Building project area. The EPA is addressing federal approval of these latter two source control activities under the Toxic Substances Control Act (TSCA) through a separate, but parallel, risk-based disposal approvals (References 6 and 7).

Agency and Program Integration Issues

As discussed in the previously-issued GSP and NBF Fenceline Area risk-based disposal approvals (References 6 and 7), the EPA has determined that any authorizations necessary under TSCA PCB regulations for source control work associated with the GSP and NBF facilities should be provided under the risk-based disposal authority of 40 C.F.R. § 761.61(c). Consistent with this determination, and the set of core principles and essential elements for integration of the respective MTCA and TSCA roles and responsibilities of Ecology and the EPA documented in the previous GSP and NBF Fenceline Area approvals and in Reference 8, Boeing has provided the Ecology-approved 3-333 Building Interim Action Work Plan to the EPA for approval pursuant to 40 C.F.R. § 761.61(c) as the third LDW source control project to be evaluated under this model.

The EPA's Evaluation of Boeing's Risk-Based Disposal Approval Application

In evaluating Boeing's request for a risk-based disposal approval, the EPA has considered the following issues:

- Compliance with 40 C.F.R. § 761.61(c) requirements
- Relationship of this work to overarching cleanup requirements
- Adequacy of site characterization for cleanup purposes
- Scope of the proposed interim actions
- On-site management of PCB remediation waste
- Disposal of PCB remediation waste

The requirements of 40 C.F.R. § 761.61(c) specify that "Each application must contain information described in the notification required by § 761.61(a)(3)." These requirements, in turn, specify that the application must contain a description of the contamination, site characterization information, a cleanup plan, and a certification requirement that ensures information used to assess or characterize the PCB contamination at the cleanup site are available for EPA inspection. Based on the agency and program integration framework discussed above, the EPA is accepting the information provided by Boeing in their application (Reference 13) and to Ecology pursuant to the enforceable requirements of Agreed Order DE 5685 as satisfying the application requirements of 40 C.F.R § 761.61(c). The EPA notes that Condition 10 of this approval requires that Boeing provide the EPA with any data or information (including but not limited to site conditions that differ from those presented in the application) that activities approved herein may pose an unreasonable risk of injury to health or the environment. This condition ensures that any information relevant to this approval is available to the EPA.

Relationship of This Work to Overarching Cleanup Requirements

Most complex cleanup projects, including the LDW sediment cleanup and associated source control work, are approached on a phased or iterative approach, with early phases focused on investigation, characterization, and where appropriate, interim measures.

Subsequent phases focus on development, implementation, and monitoring of final remedial measures. This general model is being applied to the LDW sediment cleanup by the EPA through the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process, and to uplands source control work by Ecology through the MTCA process.

The EPA's review of Boeing's application for a risk-based disposal approval for the 3-333 Building interim action work plan is based on the EPA's determination that the existing Ecology process is fully adequate to establish overall cleanup objectives, schedules and priorities, and work requirements. Based on this determination, the EPA is not separately establishing overall cleanup objectives or schedules in this approval. The EPA retains the authority to establish such requirements, however, in this or any subsequent modification of it or any separate approval to ensure that cleanup of PCBs is conducted in full compliance with the requirements of 40 C.F.R. Part 761, and in a manner that ensures no unreasonable risk of injury to health or the environment. The EPA expects to continue to work closely with Ecology, the lead regulatory agency for LDW source control work, to help ensure full compliance with TSCA requirements, and effective integration of MTCA and TSCA requirements.

Adequacy of Site Characterization for Cleanup Purposes

Boeing has conducted several field investigations that help define the nature and extent of PCB contamination associated with the NBF properties. These various studies are identified in the interim action work plan provided to the EPA by Boeing as the basis for the respective applications for risk-based disposal approvals (See References 1 as revised by Reference 13 and 5). The purpose of these sampling exercises has been to document the location and extent of soils with PCBs exceeding 50 ppm to facilitate the division of excavated soils for purposes of disposal, and to define the initial scope of excavation for PCB-containing soils. These sampling results are adequate for establishing the scope of the proposed interim actions. The EPA notes that the NBF interim action work plan states in Section 3.1.1 that additional excavation may be performed if samples used to confirm that the interim action levels have been achieved are above the proposed interim action levels.

One of the expectations established in the TSCA/MTCA integration framework documented in Reference 8 is that all spills or releases of PCBs meeting the definition of "PCB Remediation Waste" at 40 C.F.R. § 761.3 must be addressed[4]. The 3-333 Building Interim Action Work Plan proposes to address soils containing PCBs less 50 ppm in accordance with MTCA, not TSCA requirements. The Boeing 3-333 Building Interim Action work plan (Reference 13) includes a discussion of possible sources, dates, and source concentration of PCBs found in the project area. In particular, Section 3.2 of the Boeing Fenceline Interim Action work plan states:

> "Although some PCB-containing materials have been identified at NBF, including concrete joint material, caulk, and paint, potential sources for the PCBs present in soil in the fenceline area have not been identified. PCBs were initially detected by Metro (Municipality of Metropolitan Seattle) at the NBF/GTSP site in 1982. Investigations and interviews by Metro at that time did not identify any recent releases of PCBs. Extensive subsequent investigations and review of

[4] This expectation is based on the requirements of 40 CFR 761.50(b)(3)(iii), which states "The owner or operator of a site containing PCB remediation waste has the burden of proving the date that the waste was placed in a land disposal facility, spilled, or otherwise released into the environment, and the concentration of the original spill."

historical documents by Ecology, Boeing, and the City also did not identify PCB releases at the NBF properties. Based on these investigations, releases to soil in the 3-333 building area were determined to have occurred prior to April 1978, the date specified in the TSCA definition of a PCB remediation waste (40 C.F.R. 761.3). Therefore, soil with concentrations of PCBs less than 50 mg/kg is not considered PCB remediation waste and the cleanup and disposal of this soil will be conducted in compliance with MTCA requirements and as an interim action in accordance with the NBF/GTSP Agreed Order."

Given the environmental complexity of the GSP and NBF project areas, and the acknowledgment that specific, verifiable potential sources of PCBs contributing to contamination in the two project areas have not been identified, the EPA has determined that analysis presented in the Boeing 3-333 Building Interim Action work plan cannot conclusively rule out the potential for a source with PCB concentrations greater than 50 ppm, or an unauthorized use, from which a release occurred after April 1978 such that PCBs with as-found concentrations less than 50 ppm would meet the definition of PCB remediation waste at 40 C.F.R. § 761.3. Therefore, the EPA is electing not to make a final determination as to whether or not PCBs with as-found concentrations less than 50 ppm within the 3-333 Building project area meet the definition of "PCB remediation waste." The EPA may elect to make such a determination at a later date through a modification of this approval. In doing so, the EPA acknowledges that even if a decision was made that PCBs with as-found concentrations less than 50 ppm do meet the definition of PCB remediation waste, the interim actions approved by Ecology under MTCA authority appear adequate to ensure no unreasonable risk of injury to health or the environment.

Scope of the Proposed Interim Actions

As documented in the 3-333 Building Interim Action Work Plan, the primary objective of the NBF 3-333 building soil excavation interim cleanup action is to remove accessible soil that contains concentrations of PCBs greater than the proposed interim action levels. PCBs that are known to be, or potentially are present in groundwater at or near the 3-333 Building project area are not considered as part of this interim action[5]. Similarly, some PCBs which may be present in soils below the water table will not be addressed though this interim action. The EPA expects that PCBs that may be present in groundwater, and that may remain in inaccessible soils, will be considered through the RI/FS and final remedy selection process.

On-Site Management of PCB Remediation Waste

The 3-333 Building Interim Action work plan notes that there are some areas where soils with PCBs greater than 50 ppm may extend into the saturated soil zone. Therefore, there is a potential for such soils to contain drainable groundwater that has been in contact with PCBs at concentrations greater than 50

[5] Section 2.4 in the June 9, 2011 version of the 3-333 Building Interim Action Work plan notes that groundwater monitoring well NGW517 located within the project area was found to contain 20.8 µg/L of PCBs. In response to questions from the EPA and Ecology concerning the Interim Action Work Plan (Reference 10), Boeing provided additional sampling data concerning well NGW517 that suggests that the reported PCBs "are a result of PCBs bound to soil particles which were suspended in the sample." The EPA notes this analysis, with the expectation that the significance of PCBs in the saturated zone, whether associated with groundwater itself or soil, will be evaluated through future RI/FS activities. The EPA further notes that the 3-333 Building Interim Action Work Plan does discuss interim action levels for groundwater and surface water in Section 2.1 of the Work Plan.

ppm. The NBF Interim Action work plan notes that "Excavated soil will be allowed to drain to remove free liquids (...)" but does not document any particular management standards or practices associated with dewatering of PCB remediation waste. Therefore, the EPA is including a requirement that ensures that soil dewatering is conducted within the footprint of soils excavated within the soil saturated zone to minimize the potential spread of contamination within the project area during dewatering. The EPA is also requiring that soils be dewatered such that no free-flowing water remains before placing dewatered soils in lined roll-off boxes or trucks for off-site disposal.

The 3-333 Building Interim Action Work Plan does not propose any other on-site management of PCB remediation waste.

Disposal of PCB Remediation Waste

The 3-333 Building Interim Action work plan states that PCB remediation waste generated pursuant to this authorization will be disposed of in the Waste Management NW chemical waste landfill in Arlington, Oregon. Although the scope of this approval does not extend to the final disposal of PCB remediation waste, the proposed method of disposal is compliant with the performance-based disposal requirements for non-liquid PCB remediation waste at 40 C.F.R. § 761.61(b)(2(i).

The 3-333 Building Interim Action work plan documents that extracted groundwater (such as from well points which may be installed to dewater the project area in areas of deeper soil excavation) and construction water will be contained, pre-treated, and discharged to the sanitary sewer through a project-specific temporary onsite wastewater treatment system. The EPA has provided a regulatory analysis of this wastewater treatment system in the parallel GSP approval, based on information provided in the GSP Interim Action Work Plan (Reference 4).

Discussion of Conditions

1. Boeing is authorized to perform cleanup and verification sampling of PCB remediation waste with PCB concentrations greater than or equal to 50 ppm as documented in Reference 13.

This condition establishes overall authorization for the proposed interim cleanup and verification sampling of PCB remediation waste with as-found concentrations greater than 50 ppm, and defines the scope of the authorized activities. The EPA notes that the final scope of work subject to this approval will be determined by field verification sampling.

2. Boeing must complete work authorized by Condition 1 by December 31, 2011. As a framework for anticipated final cleanup, this approval will remain in effect for the duration of such work requirements as the EPA may establish through future modifications of this approval. Boeing may request an extension to this authorization by providing a written request to the EPA according to Condition 11.

The interim action work plan approved by Ecology (Reference 1, as revised by Reference 13) does not provide a detailed implementation schedule, other than a brief outline in Section 6.0 of Reference 1, which notes that cleanup activities are currently expected to be completed in approximately 30 days. The EPA is establishing a requirement to complete the interim cleanup activities established by

Condition 1 by December 31, 2011, to allow completion of field activities with reasonable additional time to complete follow-up activities such as analytical, quality assurance/quality control and reporting.

Since this approval is expected to be modified in the future to include future final cleanup activities, as well as the potential for additional interim cleanup activities, the EPA is establishing that this approval as a whole will remain in effect for the duration of corresponding modifications which the EPA may make.

3. In conducting work authorized by this approval, Boeing shall ensure that effective controls are in place to prevent or minimize dispersal of soil or other material contaminated with PCBs. Such measures may include, but are not limited to, use of exclusion and decontamination zones around work areas, and the source control activities documented in Section 3.6.1.1 of Reference 1. If water is used for dust control purposes, the amount of water shall be limited to that necessary for effective dust control to minimize the potential for the spread of contamination. All water used for decontamination and vehicle/truck washes shall be managed in the wastewater treatment system documented in Section 3.4 of Reference 13.

The EPA is establishing this condition to ensure that the authorized interim cleanup activities do not result in off-site migration of PCBs, and that the authorized activities do not pose an unreasonable risk of injury to health of on-site workers or the public, or to the environment.

4. Boeing shall ensure that any dewatering of excavated soils as discussed in Section 3.1 of Boeing's application (Reference 13) will occur within the footprint of the TSCA excavation documented in Figure 7 of Reference 13. To the extent practicable, all drained water shall be returned to the excavation at or near the location of soils within the saturated zone to minimize the potential spread of PCB contamination, or managed in the temporary wastewater treatment system or NBF decant treatment facility as documented in Section 2.4 of Reference 13. Soils excavated pursuant to this approval from within the saturated zone must be dewatered such that no free-flowing water remains before placing such soils in lined trucks or roll-off boxes for off-site disposal.

The EPA is establishing this condition to ensure on-site dewatering of PCB remediation waste to be excavated from areas below the seasonal groundwater level is conducted in a manner that prevents the spread of contamination within or beyond the project area.

5. Boeing shall ensure that all PCB remediation waste cleaned up pursuant to this approval is disposed of according to the requirements of 40 C.F.R. § 761.61(b). All shipments of PCB remediation waste for off-site disposal shall comply with the manifest requirements of 40 C.F.R. § 761.207.

As noted in the Statement of Basis section of this approval, the scope of this approval does not extend to the final disposal of PCB remediation waste. This condition ensures that off-site shipment and disposal of PCB remediation cleaned up according to the requirements of this approval is in compliance with the requirements of 40 C.F.R. Part 761.

6. Boeing shall ensure that any contractor conducting work authorized by this approval is provided a copy of the approval prior to the start of the authorized work. Boeing shall ensure that all work subject to this approval is conducted according to the conditions of this approval.

The EPA is issuing this approval to Boeing, who will be responsible for compliance with its conditions. The EPA recognizes that Boeing will engage the services of a contractor or contractors to perform the authorized work, and is establishing this condition to ensure that any and all contractors performing work under this approval are aware of its requirements.

7. Boeing shall ensure that all work subject to this approval will be subject to the requirements of the Health and Safety Plan (HASP) included as Appendix E to Reference 13, including appropriate training requirements in Section 5.0 and personal safety requirements in Section 4.0 of the HASP for all personnel that may be exposed to PCBs during work subject to this approval.

This condition ensures that appropriate training, personal protective equipment and work practices are in place for work conducted pursuant to this approval.

8. Within ten (10) days following receipt of any written approval from Ecology pursuant to Agreed Order DE 5685 for any additional or modified work at or within the physical boundaries of NBF hat is subject in whole or part to the requirements of 40 C.F.R. Part 761, Boeing shall provide a written request to the EPA according to Condition 11 to modify this approval to include the additional or modified work requirements. This request shall include a copy of Ecology's written approval.

As noted elsewhere, the initial version of this approval is intended to address interim cleanup actions, with the anticipation of additional site characterization and corresponding final cleanup measures to be established later, generally following the cleanup process under the MTCA. This condition ensures that Boeing will provide the EPA with a request for modification of this approval as subsequent stages of the overall cleanup are developed.

9. Nothing in this approval relieves Boeing of any obligation to comply with other rules and regulations applicable to the activities subject to this approval.

This condition is established to ensure that this approval is not interpreted to supersede, or provide relief from, any other rules or regulations applicable to the activities subject to this approval.

10. If at any time before, during, or after cleanup and verification sampling of PCB remediation waste pursuant to this approval, Boeing possesses or is otherwise made aware of any data or information (including but not limited to site conditions that differ from those presented in the application) that activities approved herein may pose an unreasonable risk of injury to health or the environment, Boeing must report such data or information via facsimile or e-mail to the EPA according to Condition 12 within five working days, and in writing to the EPA Region 10 Regional Administrator within 30 calendar days of first possessing or being made aware of such data or information. Boeing shall also report in the same manner, new or different information related to a condition or any element of the approved activities if the information is relevant to this approval. The EPA may direct Boeing to take such actions it finds necessary to ensure the approved activities do not pose an unreasonable risk of injury to health or the environment. Boeing shall follow such direction until written approval is obtained from the EPA that finds the condition(s) requiring such direction no longer poses an unreasonable risk of injury to health or the environment.

This condition ensures that if any information not available to EPA at the time this approval is issued becomes known, it will be made available to the EPA for purposes of ensuring that activities subject to this approval continue to pose no unreasonable risk of injury to health or the environment. This condition also ensures EPA's ability to make changes to the storage activities, including withdrawing approval for storage, as necessary to ensure no unreasonable risk of injury to health or the environment.

11. The EPA reserves the right to modify or revoke this approval based on information provided pursuant to Condition 10, or any other information available to the EPA that provides a basis to conclude that activities covered by this approval pose an unreasonable risk of injury to health or the environment. Boeing may request modification of this approval by providing written notice

according to Condition 12. If the EPA agrees with a request for modification, the EPA will provide written approval to Boeing. Prior to obtaining written approval of a modification request, Boeing shall comply with the existing approval conditions.

This condition establishes a basic framework for modification of this approval.

12. Submissions required by, or that may be submitted pursuant to, this approval shall be provided to EPA as follows:

EPA:

Edward J. Kowalski, Director
Office of Compliance and Enforcement
EPA Region 10
1200 6th Ave., Suite 900, MS OCE-164
Seattle, Washington 98101

E-mail: Kowalski.edward@epa.gov
Facsimile: (206) 553-7176

w/copies to

Dave Bartus
Office of Air, Waste and Toxics
EPA Region 10
1200 6th Avenue, Suite 900, MS AWT-122
Seattle, Washington 98101

E-mail: Bartus.dave@epa.gov
Facsimile: (206) 553-8509

This condition specifies the addresses for submissions required or that may be submitted pursuant to this approval.